(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau [WIPO]

[Bar Code]

(43) International Publication Date
October 6, 2005 (10/06/2005)

PCT

(10) International Publication Number WO 2005/093357 A1

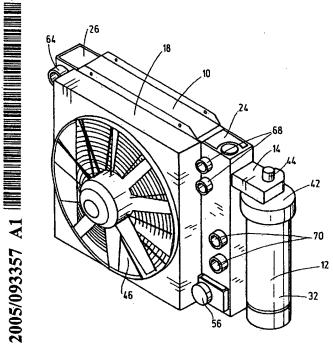
- (51) International Patent Classification⁷: **F28F 9/00**, 9/04, B01D 35/00
- (21) International Application No.: PCT/EP2005/002280
- (22) International Filing Date:

 March 4, 2005 (03/04/2005)
- (25) Language in which the international application was originally filed: German
- (26) Language in which the international application is published: German
- (30) Priority Data: 10 2004 015 505.4 March 28, 2004 (03/28/2004) DE

- (71) Applicant (for all designated states except the U.S.): HYDAC S.A. [CH/CH]; Zona Industria - Via Sceresa, CH-6805 Mezzovico (CH).
- (72) Inventor; and
- (75) Inventor/Applicant (U.S. only): **ZEOLLA**, Guiseppe [CH/CH]; Salita al Colli 5, CH-6600 Muralto (CH).
- (74) Representative: **BARTELS AND PARTNER**; Lange Strasse 51, 70174 Stuttgart (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DK, DM, DZ,

[continued on next page]

(54) Title: COOLING DEVICE



(57) Abstract: A cooling device comprises a cooling unit (10) through which a fluid to be cooled, in particular hydraulic oil, can flow, the unit having a housing (18) and at least one filter unit (12) for filtering the fluid. The housing (18) of the cooling unit (10) comprises at least one overhanging support arm (14) which establishes a fluid communication between the corresponding filter unit (12) and the cooling unit (10). The filter unit (12) with the filter element is thus arranged outside the actual housing of the cooling unit (10), while being connected in an integrated manner to the same by means of the support arm (14).

(57) Zusammenfassung: Erfindung betrifft eine Kühlvorrichtung mit einer von einem zu kühlenden Fluid. inshesondere Hydrauliköl. durchströmbaren Kühleinheit (10), die ein Vorrichtungsgehäuse (18) aufweist und mit mindestens einer Filtereinheit (12) für die Filtration des Fluids. Dadurch, dass das Vorrichtungsgehäuse (18) der Kühleinheit (10) mindestens einen auskragenden Tragarm (14) aufweist, über den die jeweilige Filtereinheit (12) fluidführend mit der Kühleinheit (10) verbunden ist, ist die Filtereinheit (12) mit dem Filterelement außerhalb des

eigentlichen Vorrichtungsgehäuse der Kühleinheit (10) angeordnet, und dennoch integrativ über den Tragarm (14) mit derselben verbunden.

EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TY, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

With International Search Report.

Reference is made for an explanation of the two-letter codes and the other abbreviations to the Guidance Notes on Codes and Abbreviations in the front section of each regular PCT Gazette edition.